Honors Algebra 1
Chapter 1 and 2 Review Test
Name: Key

Evaluate, SHOW YOUR WORK and circle your final answer. Be organized.

1. $\frac{-24}{4} \cdot 2$

$\boxed{-12}$

2. $-42 + 19$

$\boxed{-23}$

3. -2^3

$\boxed{-8}$

4. $(-2)^3$

$\boxed{-8}$

5. $|6 - (-4)|$

$\boxed{10}$

6. $\sqrt{\frac{1}{9}} - \sqrt{\frac{1}{36}}$

$\frac{\sqrt{1}}{\sqrt{9}} - \frac{\sqrt{1}}{\sqrt{36}} = \frac{1}{3} - \frac{1}{6}$

$= \frac{2}{6} - \frac{1}{6} = \boxed{\frac{1}{6}}$

7. $\frac{-3}{15} - \frac{1}{6}$ common denom. = 30

$\frac{-6}{30} - \frac{5}{30}$

$= \frac{-6}{30} + \frac{-5}{30} = \boxed{-\frac{11}{30}}$

8. $\frac{-7}{12} \div \frac{-5}{4}$

$\frac{-7}{12} \cdot \frac{-4}{5}$

$= \frac{28}{60} = \boxed{\frac{7}{15}}$

9. $\frac{4^0}{7}$

$4^0 = 1$

$\boxed{\frac{1}{7}}$

10. $-9 - (-8)$

$-9 + {}^{+}8$

$= \boxed{-1}$

11. $[30 - (19 - 7)] + 3$

$[30 - 19 + 7] + 3$

$18 + 3 = \boxed{21}$

12. $4^2 - 8 + 5 \cdot 8$

$16 - 8 + 5 \cdot 8$

$16 - 8 + 40$

$8 + 40 = \boxed{48}$

13. $4 \cdot 8 + 8 \div 4 + (9 - 4)$

$(4 \cdot 8) + (8 \div 4) + 5$

$32 + 2 + 5$

$= \boxed{37}$

14. $4 - (-5) - [3 - (-7) - 9]$

$4 + {}^{+}5 - [3 + {}^{+}7 - 9]$

$4 + 5 - 1$

$= \boxed{8}$

15. $(-52) \div (-4)$

$\boxed{13}$

Simplify each expression, SHOW YOUR WORK and circle your final answer. Be organized.

16. $5(-2x) - 12x$

$-10x - 12x$

$\boxed{-22x}$

17. $-2 - x - 71$

$\boxed{-x - 73}$

18. $x - 7 - (5x + 9)$

$x - 7 - 5x - 9$

$\boxed{-4x - 16}$

or

$\boxed{-4(x - 4)}$

19. $7 - 8 \cdot 2 \div 4 + 9$

$7 - 16 \div 4 + 9$

$7 - 4 + 9$

$3 + 9$

$= \boxed{12}$

20. $9n + 2(5n + 7)$

$9n + 10n + 14$

$\boxed{19n + 14}$

21. $-5(5m + 4n - 2m)$

$-25m - 20n + 10m$

$\boxed{-15m - 20n}$

or

$\boxed{-5(3m - 4n)}$

Substitute and evaluate. SHOW YOUR WORK and circle your final answer. Be organized.

22. Find $\frac{2}{7}x + 7$ if $x = 35$

$\frac{2}{7}(35) + 7$

$\left(\frac{2}{7} \cdot \frac{35}{1}\right) + 7$

$\frac{70}{7} + 7 = 10 + 7$

$\boxed{= 17}$

23. Find $\frac{3+k}{21}$ if $k = -4$

$\frac{3 + (-4)}{21}$

$\boxed{\frac{-1}{21}}$

24. Find $(7 - g) \div (-12 + g)$ if $g = 2$

$(7 - 2) \div (-12 + 2)$

$5 \div (-10)$

$= \boxed{\frac{-1}{2}}$

25. Find $(4 - x)^2(x + 5)(7 - x)(x - 1)^3(x - 2)^0$ if $x = 3$

$(4 - 3)^2(3 + 5)(7 - 3)(3 - 1)^3(3 - 2)^0$

$(1)^2(8)(4)(2)^3(1)^0$

$(1)(8)(4)(8)(1)$

$(8)(4)(8) = (64)(4) = \boxed{256}$

Extra Credit: Simplify, SHOW YOUR WORK and circle your final answer. Be organized.

1. $6(6+2x)+4(2+3x)+\frac{1}{2}(4x+8)-4+\underbrace{(6x+7)^0}_{=1}-2(3)^2$ → (2)(9)

$36+12x+8+12x+2x+4-4+1-18$

$\boxed{27+26x}$

2. Find $-(x)^3+(5x-4x)-(3x^2+2x)-(2x-3x+4x)-(6-x-2)^2$ if $x=-2$

$-(-2)^3+(5(-2)-4(-2))-(3(-2)^2+2(-2))-(2(-2)-3(-2)+4(-2))$
$-(6-(-2)-2)^2$

$=8+(-10-(-8))-(12-4)-(-4+6-8)$
$-(6+4-2)^2$

$=8-2-8-(-12)-(8)^2$
$=8-2-8+12-64$
$=-2+12-64$
$=\boxed{-54}$